

SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT: Andrew C. Braisted
J. Kevin Judice
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Melissa A. Starovasnik
James A. Wells

(ii) TITLE OF INVENTION: Constrained Helical Peptides and
Methods of Making Same

(iii) NUMBER OF SEQUENCES: 113

(iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: Genentech, Inc.
(B) STREET: 1 DNA Way
(C) CITY: South San Francisco
(D) STATE: California
(E) COUNTRY: USA
(F) ZIP: 94080

(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
(D) SOFTWARE: WinPatin (Genentech)

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: Unassigned
(B) FILING DATE: 05-Nov-1997
(C) CLASSIFICATION:

(viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: Torchia, PhD., Timothy E.
(B) REGISTRATION NUMBER: 36,700
(C) REFERENCE/DOCKET NUMBER: P1005R2

(ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: 650/225-8674
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(2) INFORMATION FOR SEQ ID NO:1:

0054316 051501

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 36 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear
- (ii) MOLECULE TYPE: DP178

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

Tyr	Thr	Ser	Leu	Ile	His	Ser	Leu	Ile	Glu	Glu	Ser	Gln	Asn	Gln
1				5					10					15
Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	Trp	Ala
			20						25					30
Ser	Leu	Trp	Asn	Trp	Phe									
			35		36									

(2) INFORMATION FOR SEQ ID NO:2:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 27 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

Tyr	Thr	Ser	Leu	Ile	His	Ser	Leu	Ile	Glu	Glu	Ser	Gln	Asn	Gln
1				5					10					15
Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp			
			20						25		27			

(2) INFORMATION FOR SEQ ID NO:3:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 27 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

Tyr	Thr	Ser	Leu	Ile	His	Ser	Leu	Ile	Xaa	Glu	Ser	Gln	Asn	Gln
1				5					10					15
Gln	Xaa	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp			

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(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 27 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

Tyr	Thr	Xaa	Leu	Ile	His	Ser	Leu	Ile	Xaa	Glu	Ser	Gln	Asn	Gln
1				5					10					15
Gln	Xaa	Lys	Asn	Glu	Gln	Glu	Leu	Xaa	Glu	Leu	Asp			
				20					25		27			

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 27 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Tyr	Thr	Ser	Leu	Ile	His	Ser	Xaa	Ile	Glu	Glu	Ser	Gln	Asn	Xaa
1				5					10					15
Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp			
				20					25		27			

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15

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Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Xaa	35	40	45
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60
Met	Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	110	115	120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135
Thr	Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150
Xaa	Xaa	Ile	Trp	Xaa	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Xaa	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Xaa	Ile	Thr	Asn	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	215	220	225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240

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Gln Gly Tyr Ser Pro Leu Ser Phe Gln Thr Xaa Leu Pro Ala Pro
245 250 255

Arg Gly Pro Asp Arg Pro Glu Gly Ile Glu Glu Glu Gly Gly
260 265 269

(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 268 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(ii) MOLECULE TYPE: HIV-JRCSF

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45	
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Arg	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Met	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120	
Gln	Leu	Met	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135	
Thr	Ala	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asp	140	145	150	

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Ser	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Lys	Glu	Ile	155	160	165
Glu	Asn	Tyr	Thr	Asn	Thr	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180
Ile	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Gly	Ile	Thr	Lys	Trp	Leu	Trp	200	205	210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	215	220	225
Arg	Ile	Val	Phe	Ser	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	230	235	240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Ala	Thr	Arg	245	250	255
Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly			260	265	268

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20		25	30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35		40	45
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50		55	60

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Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu	65	70	75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90
Ala	Gln	Gln	Arg	Met	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Gly	Asp	Gln	110	115	120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asp	140	145	150
Arg	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile	155	160	165
Asp	Asn	Tyr	Thr	Ser	Glu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Lys	Trp	Leu	Trp	200	205	210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu	215	220	225
Arg	Leu	Val	Phe	Thr	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	230	235	240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Ala	Pro	Arg	245	250	255
Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly			260	265	268

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 268 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu	35	40	45	
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Arg	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	Gln	110	115	120	
Gln	Leu	Leu	Glu	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135	
Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asn	140	145	150	
Gln	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile	155	160	165	
Asp	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180	
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195	

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Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Asn	Trp	Leu	Trp
				200					205					210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu
				215					220					225
Arg	Ile	Val	Phe	Ser	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln
				230					235					240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Ala	Arg	Arg
				245					250					255
Glu	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly		
				260					265			268		

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 268 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu
				35					40					45
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Met	Ala	Ile	Glu
				80					85					90
Ala	Gln	Gln	His	Met	Leu	Glu	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln
				95					100					105

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Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Ser	140	145	150
Asp	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile	155	160	165
Asp	Asn	Tyr	Thr	Asn	Leu	Ile	Tyr	Ser	Leu	Ile	Glu	Asp	Ser	Gln	170	175	180
Ile	Gln	Gln	Glu	Lys	Asn	Glu	Lys	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Asn	Trp	Leu	Trp	200	205	210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	215	220	225
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	230	235	240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Gly	Arg	Arg	245	250	255
Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly			260	265	268

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 267 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	---	---	----	----

Tyr	Lys	Val	Val	Lys	Ile	Glu	Leu	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60
Gly	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu	Ser	65	70	75
Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	Gly	80	85	90
Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	Leu	95	100	105
Gln	Ala	Arg	Ile	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	Gln	110	115	120
Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	Thr	125	130	135
Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Glu	Glu	140	145	150
Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile	Asp	155	160	165
Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	Gln	Asn	170	175	180
Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Gly	Leu	Asp	Lys	Trp	185	190	195
Ala	Ser	Leu	Trp	Asn	Trp	Phe	Thr	Ile	Thr	Asn	Trp	Leu	Trp	Tyr	200	205	210
Ile	Arg	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu	Arg	215	220	225
Ile	Val	Phe	Thr	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	Gly	230	235	240

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Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Ala	Pro	Arg	Gly
				245					250					255

Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly
				260					265		267

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 269 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr
				35					40					45
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60
Met	Gly	Ala	Thr	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu
				65					70					75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile
				80					85					90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95					100					105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp
				110					115					120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys
				125					130					135
Thr	Thr	Thr	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu
				140					145					150

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Asp	Lys	Ile	Trp	Gly	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Asn	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	215	220	225
Leu	Arg	Ile	Val	Phe	Thr	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Ser	Gln	245	250	255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 268 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45	
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	

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Gly	Ala	Ala	Ala	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu	
				65					70						75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	
				80					85						90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	
				95					100						105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	Gln	
				110					115						120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	
				125					130						135
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asn	
				140					145						150
Lys	Ile	Trp	Asp	Asn	Met	Thr	Trp	Ile	Glu	Trp	Asp	Arg	Glu	Ile	
				155					160						165
Asn	Asn	Tyr	Thr	Ser	Ile	Ile	Tyr	Ser	Leu	Ile	Glu	Glu	Ser	Gln	
				170					175						180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	
				185					190						195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Lys	Trp	Leu	Trp	
				200					205						210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	
				215					220						225
Arg	Ile	Val	Phe	Ser	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	
				230					235						240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Ser	Ser	Arg	
				245					250						255
Gly	Pro	Asp	Arg	Pro	Gly	Gly	Ile	Glu	Glu	Glu	Gly	Gly			
				260					265						268

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

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(A) LENGTH: 268 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu	35	40	45	
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	Gln	110	115	120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135	
Thr	Thr	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asn	140	145	150	
Glu	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Lys	Trp	Glu	Arg	Glu	Ile	155	160	165	
Asp	Asn	Tyr	Thr	His	Ile	Ile	Tyr	Ser	Leu	Ile	Glu	Gln	Ser	Gln	170	175	180	
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Ala	Leu	Asp	Lys	185	190	195	

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Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Lys	Trp	Leu	Trp
				200					205					210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu
				215					220					225
Arg	Ile	Val	Phe	Val	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln
				230					235					240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Ala	Gln	Arg
				245					250					255
Gly	Pro	Asp	Arg	Pro	Asp	Gly	Ile	Glu	Glu	Glu	Gly	Gly		
				260				265				268		

(2) INFORMATION FOR SEQ ID NO:15:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 267 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Thr	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Ala	Ile	Gly
				35					40					45
Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	Gly
				50					55					60
Ala	Ala	Ser	Val	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu	Ser
				65					70					75
Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	Ala
				80					85					90
Gln	Gln	His	Met	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	Leu
				95					100					105

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Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	Gln	110	115	120
Leu	Leu	Gly	Phe	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	Thr	125	130	135
Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asp	Asp	140	145	150
Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Arg	Glu	Ile	Asp	155	160	165
Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Ser	Leu	Leu	Glu	Lys	Ser	Gln	Thr	170	175	180
Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	Trp	185	190	195
Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Asn	Trp	Leu	Trp	Tyr	200	205	210
Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu	Arg	215	220	225
Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	Gly	230	235	240
Tyr	Ser	Pro	Leu	Ser	Leu	Gln	Thr	Arg	Pro	Pro	Val	Pro	Arg	Gly	245	250	255
Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly				260	265	267

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 268 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5				10						15

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Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60
Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	65	70	75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105
Leu	Gln	Ala	Arg	Ile	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Glu	140	145	150
Gln	Ile	Trp	Asn	His	Thr	Thr	Trp	Met	Glu	Trp	Asp	Arg	Glu	Ile	155	160	165
Asn	Asn	Tyr	Thr	Ser	Leu	Ile	His	Ser	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Asn	Trp	Leu	Trp	200	205	210
Tyr	Ile	Lys	Leu	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu	215	220	225
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	230	235	240

Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Thr	Pro	Arg
				245					250					255

Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Gly	Gly
				260				265			268

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 268 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Arg	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80					85					90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln
				95					100					105
Leu	Gln	Ala	Arg	Ile	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln
				110					115					120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr
				125					130					135
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Glu
				140					145					150

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Gln	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Asp	Arg	Glu	Ile
				155					160					165
Asn	Asn	Tyr	Thr	Ser	Leu	Ile	His	Ser	Leu	Ile	Glu	Glu	Ser	Gln
				170					175					180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys
				185					190					195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Asn	Trp	Leu	Trp
				200					205					210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu
				215					220					225
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln
				230					235					240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Thr	Pro	Arg
				245					250					255
Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly		
				260				265				268		

(2) INFORMATION FOR SEQ ID NO:18:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 268 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60

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Gly	Cys	Thr	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	65	70	75
Ser	Asp	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105
Leu	Gln	Ala	Arg	Ile	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Glu	140	145	150
Gln	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Asp	Arg	Glu	Ile	155	160	165
Asn	Asn	Tyr	Thr	Ser	Leu	Ile	His	Ser	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Asn	Trp	Leu	Trp	200	205	210
Tyr	Ile	Lys	Leu	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu	215	220	225
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	230	235	240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Ile	Pro	Arg	245	250	255
Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly			260	265	268

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 268 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Thr	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45	
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	
Leu	Gln	Ala	Arg	Ile	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135	
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Glu	140	145	150	
Gln	Phe	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Asp	Arg	Glu	Ile	155	160	165	
Asn	Asn	Tyr	Thr	Ser	Leu	Ile	His	Ser	Leu	Ile	Asp	Glu	Ser	Gln	170	175	180	
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195	

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Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Asn	Trp	Leu	Trp
				200					205					210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu
				215					220					225
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln
				230					235					240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Asn	Arg	Gly
				245					250					255
Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly		
				260				265				268		

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ala
				35					40					45
Ile	Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60
Met	Gly	Ala	Val	Ala	Leu	Thr	Leu	Thr	Val	Gln	Thr	Arg	Gln	Leu
				65					70					75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile
				80					85					90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95					100					105

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Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp
				110					115					120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys
				125					130					135
Thr	Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu
				140					145					150
Asp	Lys	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu
				155					160					165
Ile	Asp	Asn	Tyr	Thr	Asn	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser
				170					175					180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Lys	Asp	Leu	Leu	Glu	Leu	Asp
				185					190					195
Thr	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Asn	Trp	Leu
				200					205					210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Ile	Gly	Gly	Leu	Ile	Gly
				215					220					225
Leu	Arg	Ile	Val	Phe	Thr	Ile	Leu	Ser	Leu	Val	Asn	Arg	Val	Arg
				230					235					240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Phe	Pro	Val	Pro
				245					250					255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly	
				260					265				269	

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5				10						15

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Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ala	35	40	45
Leu	Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60
Met	Gly	Ala	Ala	Ser	Met	Ala	Leu	Thr	Val	Gln	Thr	Arg	Gln	Leu	65	70	75
Met	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Lys	Ala	Ile	80	85	90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	110	115	120
Gln	Gln	Leu	Leu	Arg	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135
Thr	Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150
Asp	Lys	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	170	175	180
Gln	Ile	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Lys	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	215	220	225
Leu	Arg	Ile	Val	Phe	Thr	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240

Gln Gly Tyr Ser Pro Leu Ser Phe Gln Thr Arg Leu Pro Ala Gln
 245 250 255

Arg Gly Pro Asp Arg Pro Glu Gly Ile Glu Glu Glu Gly Gly
 260 265 269

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr
				35					40					45
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60
Met	Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu
				65					70					75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile
				80					85					90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95					100					105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Leu	Glu	Arg	Tyr	Leu	Arg	Asp
				110					115					120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys
				125					130					135
Thr	Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Thr	Leu
				140					145					150

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Asp Met Ile Trp	Asp Asn Met Thr Trp	Met Glu Trp Glu Arg Glu	
155		160	165
Ile Glu Asn Tyr	Thr Gly Leu Ile Tyr	Thr Leu Ile Glu Glu Ser	
170		175	180
Gln Asn Gln Gln	Glu Lys Asn Glu Gln	Asp Leu Leu Ala Leu Asp	
185		190	195
Lys Trp Ala Ser	Leu Trp Asn Trp Phe	Asp Ile Ser Asn Trp Leu	
200		205	210
Trp Tyr Ile Lys	Ile Phe Ile Met Ile	Val Gly Gly Leu Ile Gly	
215		220	225
Leu Arg Ile Val	Phe Thr Val Leu Ser	Ile Val Asn Arg Val Arg	
230		235	240
Gln Gly Tyr Ser	Pro Leu Ser Phe Gln	Thr His Leu Pro Ala Pro	
245		250	255
Arg Gly Pro Asp	Arg Pro Glu Gly Ile	Glu Glu Glu Gly Gly	
260		265	269

(2) INFORMATION FOR SEQ ID NO:23:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

Gly Gly Gly Asn Met Arg Asp Asn Trp Arg Ser Lys Leu Tyr Lys	
1 5 10 15	
Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Lys	
20 25 30	
Ala Lys Arg Arg Val Val Gln Arg Lys Lys Arg Ala Val Gly Thr	
35 40 45	
Ile Gly Ala Met Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr	
50 55 60	

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Met	Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu
				65					70					75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile
				80					85					90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95					100					105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Gln	Asp
				110					115					120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys
				125					130					135
Thr	Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu
				140					145					150
Asp	Glu	Ile	Xaa	Asn	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Arg	Glu
				155					160					165
Ile	Ser	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser
				170					175					180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Leu	Glu	Leu	Leu	Glu	Leu	Asp
				185					190					195
Lys	Trp	Ala	Ser	Leu	Xaa	Asn	Trp	Phe	Asp	Ile	Thr	Asn	Trp	Leu
				200					205					210
Trp	Ser	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Ala	Gly	Leu	Val	Gly
				215					220					225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg
				230					235					240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Thr	Pro
				245					250					255
Arg	Gly	Pro	Asp	Arg	Pro	Gly	Gly	Ile	Glu	Glu	Glu	Gly	Gly	
				260					265					269

(2) INFORMATION FOR SEQ ID NO:24:

(A) LENGTH: 269 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu	35	40	45	
Ile	Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90	
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105	
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	110	115	120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Val	Cys	125	130	135	
Thr	Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150	
Asn	Gln	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165	
Ile	Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Arg	Leu	Ile	Glu	Glu	Ser	170	175	180	
Gln	Asn	Gln	Gln	Glu	Gln	Asn	Glu	Gln	Asp	Leu	Leu	Lys	Leu	Asp	185	190	195	

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Thr	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Ser	Ile	Thr	Lys	Trp	Leu
				200					205					210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly
				215					220					225
Leu	Arg	Ile	Ile	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg
				230					235					240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Ala	Pro
				245					250					255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly	
				260					265				269	

(2) INFORMATION FOR SEQ ID NO:25:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 269 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu
				35					40					45
Leu	Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60
Met	Gly	Ala	Arg	Ser	Met	Ala	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu
				65					70					75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile
				80					85					90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95					100					105

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Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp
				110					115					120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys
				125					130					135
Thr	Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Met
				140					145					150
Asp	Met	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu
				155					160					165
Ile	Asp	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser
				170					175					180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asn
				185					190					195
Lys	Trp	Glu	Asn	Leu	Trp	Ser	Trp	Phe	Asp	Ile	Ser	Asn	Trp	Leu
				200					205					210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly
				215					220					225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Ser	Val	Arg
				230					235					240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Ala	Pro
				245					250					255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly	
				260					265				269	

(2) INFORMATION FOR SEQ ID NO:26:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 268 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5				10						15

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Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	
				20					25					30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Thr	Leu	
				35					40					45	
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	
				50					55					60	
Gly	Ala	Arg	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	
				65					70					75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	
				80					85					90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	
				95					100					105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	
				110					115					120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	
				125					130					135	
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asp	
				140					145					150	
Gln	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile	
				155					160					165	
Asp	Asn	Tyr	Thr	Asn	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	Gln	
				170					175					180	
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	
				185					190					195	
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Ser	Lys	Trp	Leu	Trp	
				200					205					210	
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu	
				215					220					225	
Arg	Ile	Val	Phe	Thr	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	
				230					235					240	

Gly Tyr Ser Pro Leu Ser Phe Gln Thr Arg Phe Pro Ala Pro Arg
245 250 255

Gly Pro Asp Arg Pro Glu Gly Ile Glu Glu Gly Gly
260 265 268

(2) INFORMATION FOR SEQ ID NO:27:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 267 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

Ala	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Arg	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Met	35	40	45	
Leu	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Arg	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90	
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105	
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	110	115	120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135	
Thr	Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150	

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Asn	Glu	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	His	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Leu	Trp	Ser	Trp	Phe	Ser	Ile	Thr	Asn	Trp	Leu	Trp	Tyr	200	205	210
Ile	Arg	Ile	Phe	Ile	Ile	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu	Arg	215	220	225
Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	Gly	230	235	240
Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Thr	Gln	Arg	Gly	245	250	255
Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly				260	265	267

(2) INFORMATION FOR SEQ ID NO:28:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

Ala	Gly	Gly	Asn	Met	Lys	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Val	35	40	45	
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	

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Met	Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Lys	Leu	65	70	75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	110	115	120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135
Thr	Thr	Thr	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150
Asp	Lys	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Thr	Leu	Leu	Glu	Glu	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Ser	Ile	Thr	Asn	Trp	Leu	200	205	210
Trp	Tyr	Ile	Arg	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	215	220	225
Leu	Arg	Ile	Ile	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Ile	Pro	Ala	Gln	245	250	255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Gly	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:29:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 269 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Met	35	40	45	
Leu	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Thr	Ser	Met	Ala	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90	
Lys	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105	
Gln	Leu	Gln	Ala	Arg	Ile	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	110	115	120	
Gln	Gln	Leu	Leu	Gly	Phe	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135	
Thr	Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Thr	Leu	140	145	150	
Asp	Gln	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Asp	Arg	Glu	155	160	165	
Ile	Asp	Asn	Tyr	Thr	His	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	170	175	180	
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Gln	Gln	Glu	Leu	Leu	Gln	Leu	Asp	185	190	195	

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Lys	Trp	Ala	Ser	Leu	Trp	Thr	Trp	Ser	Asp	Ile	Thr	Lys	Trp	Leu
				200					205					210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly
				215					220					225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg
				230					235					240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Asn	Pro
				245					250					255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Thr	Glu	Glu	Gly	Gly	Gly	
				260					265					269

(2) INFORMATION FOR SEQ ID NO:30:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 269 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Ile	Lys	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45
Val	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60
Met	Gly	Ala	Val	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu
				65					70					75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile
				80					85					90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95					100					105

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Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	110	115	120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135
Thr	Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150
Glu	Asp	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Asn	Thr	Ile	Tyr	Thr	Leu	Leu	Glu	Glu	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Ser	Ile	Thr	Asn	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	215	220	225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Val	Pro	245	250	255
Arg	Gly	Pro	Asp	Arg	Pro	Asp	Gly	Ile	Glu	Glu	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:31:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	---	---	----	----

Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Lys	20	25	30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60
Met	Gly	Ala	Arg	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Lys	Leu	65	70	75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	110	115	120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135
Thr	Thr	Ala	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Met	140	145	150
Glu	Asp	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Lys	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Asn	Thr	Ile	Tyr	Thr	Leu	Leu	Glu	Glu	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Asn	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	215	220	225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Val	Val	Asn	Arg	Val	Arg	230	235	240

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Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Thr	Pro
				245					250					255

Arg	Gly	Pro	Asp	Arg	Pro	Asp	Gly	Ile	Glu	Glu	Glu	Gly	Gly
				260					265				269

(2) INFORMATION FOR SEQ ID NO:32:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Asn	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Met
				35					40					45
Leu	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60
Met	Gly	Ala	Arg	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu
				65					70					75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile
				80					85					90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95					100					105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp
				110					115					120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys
				125					130					135
Thr	Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Thr	Leu
				140					145					150

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Asp	Gln	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Gln	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Ser	Leu	Trp	Ser	Trp	Tyr	Asp	Ile	Ser	Asn	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	215	220	225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Ala	Thr	245	250	255
Arg	Gly	Pro	Arg	Gln	Pro	Glu	Glu	Ile	Glu	Glu	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:33:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr	35	40	45	
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	

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Met	Gly	Ala	Gly	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	His	Leu	65	70	75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	110	115	120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135
Thr	Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150
Asn	Met	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Gly	Ile	Ile	Tyr	Asn	Leu	Leu	Glu	Glu	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Asn	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Gln	Trp	Leu	200	205	210
Trp	Tyr	Ile	Arg	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	215	220	225
Leu	Lys	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Ala	Pro	245	250	255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Gly	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:34:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 269 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr	35	40	45	
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Gly	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90	
Asp	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105	
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	110	115	120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135	
Thr	Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Met	140	145	150	
Asn	Gln	Ile	Trp	Asp	Asn	Leu	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165	
Ile	Asp	Asn	Tyr	Thr	Ser	Ile	Ile	Tyr	Ser	Leu	Ile	Glu	Glu	Ser	170	175	180	
Gln	Asn	Gln	Gln	Gly	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195	

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Lys Trp Ala Ser Leu Trp Asn Trp Phe Asp Ile Thr Asn Trp Leu
 200 205 210
 Trp Tyr Ile Lys Ile Phe Ile Met Ile Val Gly Gly Leu Ile Gly
 215 220 225
 Leu Arg Ile Val Phe Thr Val Leu Ser Ile Val Asn Arg Val Arg
 230 235 240
 Gln Gly Tyr Ser Pro Leu Ser Phe Gln Thr His Leu Pro Thr Pro
 245 250 255
 Arg Gly Pro Asp Arg Pro Glu Gly Ile Glu Glu Glu Gly Gly
 260 265 269

(2) INFORMATION FOR SEQ ID NO:35:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

Gly Gly Gly Asn Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
 1 5 10 15
 Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Xaa
 20 25 30
 Ala Lys Arg Arg Val Val Gln Arg Glu Lys Arg Ala Val Gly Ile
 35 40 45
 Gly Ala Ala Ser Pro Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
 50 55 60
 Xaa Ala Ala Pro Thr Thr Leu Thr Val Gln Pro Arg Gln Leu Leu
 65 70 75
 Ser Gly Ile Val Gln Gln Gln Asn Asn Leu Leu Arg Ala Ile Glu
 80 85 90
 Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
 95 100 105

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Leu Gln Ala Arg Val Leu Ala Val Glu Arg Tyr Leu Lys Asp Gln
 110 115 120
 Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly Lys Leu Ile Cys Thr
 125 130 135
 Thr Thr Val Pro Trp Asn Ala Ser Trp Ser Asn Lys Ser Leu Asp
 140 145 150
 Glu Ile Trp Asn Asn Met Thr Trp Met Glu Trp Glu Arg Glu Ile
 155 160 165
 Asn Asn Tyr Thr Gly Leu Ile Tyr Thr Leu Ile Glu Glu Ser Gln
 170 175 180
 Xaa Gln Gln Glu Lys Asn Glu Leu Asp Leu Leu Glu Leu Asp Lys
 185 190 195
 Trp Ala Ser Leu Trp Asn Trp Phe Asp Ile Thr Asn Xaa Leu Trp
 200 205 210
 Tyr Ile Lys Ile Phe Ile Met Ile Val Gly Gly Leu Val Gly Leu
 215 220 225
 Arg Ile Ile Phe Thr Val Leu Ser Ile Val Asn Arg Val Arg Gln
 230 235 240
 Gly Tyr Ser Pro Leu Ser Phe Gln Thr His Leu Pro Xaa Pro Arg
 245 250 255
 Gly Pro Asp Arg Pro Gly Gly Ile Glu Glu Glu Gly Gly
 260 265 268

(2) INFORMATION FOR SEQ ID NO:36:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
 1 5 10 15

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Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Arg	
				20					25					30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr	
				35					40					45	
Leu	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	
				50					55					60	
Met	Gly	Ala	Ala	Ser	Val	Ala	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	
				65					70					75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	
				80					85					90	
Glu	Ala	Gln	Gln	His	Met	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	
				95					100					105	
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Gly	Asp	
				110					115					120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	
				125					130					135	
Thr	Thr	Thr	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	
				140					145					150	
Asp	Asp	Ile	Trp	Thr	Asn	Met	Thr	Trp	Met	Glu	Trp	Lys	Arg	Glu	
				155					160					165	
Ile	Asp	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	
				170					175					180	
Gln	Arg	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	
				185					190					195	
Lys	Trp	Asp	Ser	Leu	Trp	Asn	Trp	Phe	Thr	Ile	Ser	Lys	Trp	Leu	
				200					205					210	
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Ala	Gly	Leu	Val	Gly	
				215					220					225	
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Lys	Val	Arg	
				230					235					240	

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Gln Gly Tyr Ser Pro Val Ser Phe Gln Thr Arg Leu Pro Ala Gln
245 250 255

Arg Gly Pro Asp Arg Pro Glu Glu Ile Glu Glu Glu Gly Gly
260 265 269

(2) INFORMATION FOR SEQ ID NO:37:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 269 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Pro	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr
				35					40					45
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Thr	Ala	Gly	Ser	Thr
				50					55					60
Met	Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu
				65					70					75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Arg	Asn	Leu	Leu	Arg	Ala	Ile
				80					85					90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95					100					105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp
				110					115					120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys
				125					130					135
Thr	Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu
				140					145					150

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Asp	Lys	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Arg	Glu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Leu	Glu	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Lys	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	215	220	225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Leu	Gln	Thr	Arg	Phe	Pro	Ala	Gln	245	250	255
Arg	Gly	Pro	Gly	Gly	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:38:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 267 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45	
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	

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Gly	Ala	Ala	Ala	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu	65	70	75
Thr	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Lys	Ala	Ile	Glu	80	85	90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135
Thr	Thr	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asp	140	145	150
Lys	Ile	Trp	Gly	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile	155	160	165
Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Thr	Ile	Thr	Asn	Trp	Leu	Trp	200	205	210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	215	220	225
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	230	235	240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Ala	Pro	Arg	245	250	255
Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly				260	265	267

(2) INFORMATION FOR SEQ ID NO:39:

(i) SEQUENCE CHARACTERISTICS:

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(A) LENGTH: 268 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

Gly	Gly	Gly	Asp	Met	Arg	Glu	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Phe	35	40	45	
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135	
Thr	Asn	Val	Pro	Trp	Asn	Lys	Thr	Trp	Ser	Asn	Lys	Ser	Leu	Asp	140	145	150	
Gln	Ile	Trp	Gln	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Arg	Glu	Ile	155	160	165	
Asp	Lys	Tyr	Thr	Asp	Val	Ile	Tyr	Thr	Leu	Ile	Gly	Glu	Ser	Gln	170	175	180	
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195	

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Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Gln	Trp	Leu	Trp	200	205	210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu	215	220	225
Arg	Ile	Val	Phe	Ser	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	230	235	240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Ala	Ala	Arg	245	250	255
Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly			260	265	268

(2) INFORMATION FOR SEQ ID NO:40:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 268 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

Gly	Gly	Gly	Asn	Met	Lys	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Arg	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Ala	Gly	Leu	35	40	45	
Gly	Val	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Ala	Ser	Ile	Ala	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Met	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	

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Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	Gln	110	115	120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135
Thr	Thr	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	His	Asp	140	145	150
Gln	Ile	Trp	Gln	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Lys	Glu	Ile	155	160	165
Asp	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Asn	Leu	Ile	Glu	Val	Ser	Gln	170	175	180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Asn	Trp	Leu	Trp	200	205	210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	215	220	225
Arg	Ile	Val	Phe	Ile	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	230	235	240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Ala	Arg	Arg	245	250	255
Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly			260	265	268

(2) INFORMATION FOR SEQ ID NO:41:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:

Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	---	---	----	----

Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg			
				20					25					30			
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile			
				35					40					45			
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met			
				50					55					60			
Gly	Ala	Ala	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu			
				65					70					75			
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu			
				80					85					90			
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln			
				95					100					105			
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln			
				110					115					120			
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr			
				125					130					135			
Thr	Thr	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asp			
				140					145					150			
Gln	Ile	Trp	Gly	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Arg	Glu	Ile			
				155					160					165			
Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser	Gln			
				170					175					180			
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys			
				185					190					195			
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Asn	Trp	Leu	Trp			
				200					205					210			
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Ala	Gly	Leu	Val	Gly	Leu			
				215					220					225			
Arg	Val	Val	Phe	Ile	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln			
				230					235					240			

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Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	His	Pro	Ala	Leu	Arg
				245					250					255

Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly
				260				265				268

(2) INFORMATION FOR SEQ ID NO:42:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 269 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45
Val	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60
Met	Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu
				65					70					75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile
				80					85					90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95					100					105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp
				110					115					120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys
				125					130					135
Thr	Thr	Thr	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu
				140					145					150

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Ser	Glu	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Arg	Glu
				155					160					165
Ile	Asp	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Glu	Ser
				170					175					180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp
				185					190					195
Lys	Trp	Ala	Gly	Leu	Trp	Asn	Trp	Phe	Glu	Ile	Thr	Asn	Trp	Leu
				200					205					210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly
				215					220					225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg
				230					235					240
Gln	Gly	Tyr	Ser	Pro	Val	Ser	Phe	Gln	Thr	His	Leu	Pro	Ala	Pro
				245					250					255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly	
				260					265					269

(2) INFORMATION FOR SEQ ID NO:43:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ala
				35					40					45
Leu	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60

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Met	Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105
Gln	Leu	Gln	Ala	Arg	Ile	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	110	115	120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135
Thr	Thr	Ala	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150
Glu	Lys	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Ser	Leu	Ile	Glu	Glu	Ser	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Lys	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	215	220	225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Ala	Gln	245	250	255
Arg	Gly	Pro	Asp	Arg	Pro	Gly	Gly	Ile	Glu	Glu	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:44:

(i) SEQUENCE CHARACTERISTICS:

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(A) LENGTH: 269 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Lys	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Val	35	40	45	
Leu	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90	
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105	
Gln	Leu	Gln	Ala	Arg	Ile	Leu	Ala	Met	Glu	Arg	Tyr	Leu	Lys	Asp	110	115	120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135	
Thr	Thr	Ala	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150	
Glu	Lys	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165	
Ile	Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Ser	Leu	Ile	Gly	Glu	Ser	170	175	180	
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Glu	Leu	Asp	185	190	195	

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Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Lys	Trp	Leu
				200					205					210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly
				215					220					225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg
				230					235					240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Ala	Gln
				245					250					255
Arg	Gly	Pro	Asp	Arg	Pro	Gly	Gly	Ile	Glu	Glu	Glu	Gly	Gly	
				260					265				269	

(2) INFORMATION FOR SEQ ID NO:45:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:

Gly	Gly	Gly	Asp	Met	Lys	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Ser	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Val
				35					40					45
Leu	Gly	Ala	Met	Phe	Leu	Gly	Leu	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60
Met	Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu
				65					70					75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile
				80					85					90
Glu	Ala	Gln	Gln	His	Leu	Ser	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys
				95					100					105

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Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp
				110					115					120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys
				125					130					135
Pro	Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Arg	Ser	Leu
				140					145					150
Gln	Tyr	Ile	Trp	Asn	Asn	Met	Thr	Trp	Ile	Glu	Trp	Glu	Arg	Glu
				155					160					165
Ile	Asp	Asn	Tyr	Thr	Asp	Ile	Ile	Tyr	Ser	Leu	Ile	Glu	Lys	Ser
				170					175					180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp
				185					190					195
Gln	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Ser	Ile	Thr	Lys	Trp	Leu
				200					205					210
Trp	Tyr	Ile	Lys	Leu	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly
				215					220					225
Leu	Arg	Ile	Val	Phe	Ala	Ile	Leu	Ser	Ile	Val	Asn	Arg	Ala	Arg
				230					235					240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Ala	Pro
				245					250					255
Arg	Gly	Leu	Asp	Arg	Pro	Glu	Gly	Ile	Gly	Glu	Glu	Gly	Gly	
				260					265					269

(2) INFORMATION FOR SEQ ID NO:46:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15

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Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys	
				20					25					30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr	
				35					40					45	
Leu	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	
				50					55					60	
Met	Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	
				65					70					75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	
				80					85					90	
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	
				95					100					105	
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	
				110					115					120	
Arg	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Pro	Ile	Cys	
				125					130					135	
Thr	Thr	Ser	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Lys	Ser	Leu	
				140					145					150	
Glu	Gln	Ile	Trp	Asn	Asn	Met	Thr	Trp	Leu	Glu	Trp	Glu	Arg	Glu	
				155					160					165	
Ile	Asp	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Ser	Leu	Ile	Lys	Glu	Ser	
				170					175					180	
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	
				185					190					195	
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asn	Ile	Thr	Glu	Trp	Leu	
				200					205					210	
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	
				215					220					225	
Leu	Arg	Ile	Val	Phe	Thr	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	
				230					235					240	

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Gln Gly Tyr Ser Pro Leu Ser Phe Gln Thr Arg Leu Pro Ala Pro
245 250 255

Arg Gly Pro Asp Arg Pro Glu Gly Ile Glu Glu Gly Gly
260 265 269

(2) INFORMATION FOR SEQ ID NO:47:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 269 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:47:

Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15

Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Lys
20 25 30

Ala Lys Arg Arg Val Val Gln Arg Glu Lys Arg Ala Val Gly Val
35 40 45

Ile Gly Ala Met Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr
50 55 60

Met Gly Ala Ala Ser Met Ala Leu Thr Val Gln Ala Arg Gln Leu
65 70 75

Leu Ser Gly Ile Val Gln Gln Gln Asn Asn Leu Leu Arg Ala Ile
80 85 90

Glu Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys
95 100 105

Gln Leu Gln Ala Arg Val Leu Ala Val Glu Arg Tyr Leu Lys Asp
110 115 120

Gln Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly Lys Leu Ile Cys
125 130 135

Thr Thr Ala Val Pro Trp Asn Thr Ser Trp Ser Asn Lys Ser Leu
140 145 150

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Glu	Glu	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu
				155					160					165
Ile	Asn	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Thr	Leu	Ile	Glu	Gln	Ser
				170					175					180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Ala	Leu	Asp
				185					190					195
Thr	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Ser	Ile	Ser	Asn	Trp	Leu
				200					205					210
Trp	Tyr	Ile	Arg	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly
				215					220					225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg
				230					235					240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Arg	Leu	Pro	Thr	Pro
				245					250					255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly	
				260					265				269	

(2) INFORMATION FOR SEQ ID NO:48:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 269 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:48:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Ile	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr
				35					40					45
Ile	Gly	Val	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60

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Met	Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90
Lys	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105
Gln	Leu	Gln	Ala	Arg	Val	Leu	Ala	Ile	Glu	Arg	Phe	Leu	Arg	Asp	110	115	120
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135
Thr	Thr	Thr	Val	Pro	Trp	Asn	Thr	Ser	Trp	Ser	Asn	Lys	Ser	Leu	140	145	150
Lys	Gln	Ile	Trp	Asp	Asn	Leu	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	155	160	165
Ile	Asp	Asn	Tyr	Thr	Gly	Ile	Ile	Phe	Asn	Leu	Ile	Glu	Glu	Ala	170	175	180
Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Gly	Leu	Trp	Asn	Trp	Phe	Ser	Ile	Thr	Asn	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	215	220	225
Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Leu	Pro	Thr	Pro	245	250	255
Arg	Gly	Pro	Asp	Arg	Pro	Glu	Gly	Thr	Gly	Glu	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:49:

(i) SEQUENCE CHARACTERISTICS:

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(A) LENGTH: 233 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:49:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Lys	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45	
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Leu	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	Gln	110	115	120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135	
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asp	140	145	150	
Gln	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Arg	Glu	Ile	155	160	165	
Glu	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Asn	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180	
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195	

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Trp Ala Ser Leu Trp Ser Trp Phe Ser Ile Thr Asn Trp Leu Trp
200 205 210

Tyr Ile Arg Ile Phe Ile Met Ile Val Gly Gly Leu Ile Gly Leu
215 220 225

Arg Ile Val Phe Ala Val Leu Ser
230 233

(2) INFORMATION FOR SEQ ID NO:50:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 233 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:50:

Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15

Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Lys
20 25 30

Ala Lys Arg Arg Val Val Gln Arg Glu Lys Arg Ala Val Gly Ile
35 40 45

Gly Ala Val Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
50 55 60

Gly Ala Ala Ser Ile Thr Leu Thr Val Gln Ala Arg Leu Leu Leu
65 70 75

Ser Gly Ile Val Gln Gln Gln Asn Asn Leu Leu Arg Ala Ile Glu
80 85 90

Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
95 100 105

Leu Gln Ala Arg Val Leu Ala Val Glu Arg Tyr Leu Arg Asp Gln
110 115 120

Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly Lys Leu Ile Cys Thr
125 130 135

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Thr	Ala	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asp
				140					145					150
Gln	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Arg	Glu	Ile
				155					160					165
Glu	Asn	Tyr	Thr	Ser	Leu	Ile	Tyr	Asn	Leu	Ile	Glu	Glu	Ser	Gln
				170					175					180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys
				185					190					195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Ser	Ile	Thr	Asn	Trp	Leu	Trp
				200					205					210
Tyr	Ile	Lys	Ile	Phe	Ile	Ile	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu
				215					220					225
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser							
				230			233							

(2) INFORMATION FOR SEQ ID NO:51:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 233 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:51:

Ala	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Ile	Gln	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45
Gly	Ala	Val	Leu	Phe	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65					70					75

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Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Leu	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135
Thr	Ala	Val	Pro	Trp	Asn	Ala	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asn	140	145	150
Asp	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Gln	Trp	Asp	Arg	Glu	Ile	155	160	165
Asn	Lys	Tyr	Thr	Asp	Ser	Ile	Tyr	Gln	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Lys	Leu	Asp	Glu	185	190	195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Ser	Ile	Ser	Lys	Trp	Leu	Trp	200	205	210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Val	Gly	Leu	215	220	225
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser								230	233	

(2) INFORMATION FOR SEQ ID NO:52:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 105 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	---	---	----	----

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Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Arg
20 25 30

Ala Lys Arg Arg Val Val Gln Arg Glu Arg Arg Ala Val Gly Ala
35 40 45

Leu Gly Ala Met Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr
50 55 60

Met Gly Ala Ala Ser Leu Thr Leu Thr Val Gln Ala Arg Gln Leu
65 70 75

Leu Ser Gly Ile Val Gln Gln Gln Asn Asn Leu Leu Lys Ala Ile
80 85 90

Glu Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys
95 100 105

(2) INFORMATION FOR SEQ ID NO:53:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 105 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:53:

Gly Gly Gly Asp Met Lys Asp Asn Trp Arg Ser Lys Leu Tyr Lys
1 5 10 15

Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Arg
20 25 30

Ala Lys Arg Arg Val Val Gln Arg Glu Lys Arg Ala Val Gly Thr
35 40 45

Ile Gly Ala Met Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr
50 55 60

Met Gly Ala Ala Ser Ile Thr Leu Met Val Gln Ala Arg Gln Leu
65 70 75

Leu Ser Gly Ile Val Gln Gln Gln Arg Asn Leu Leu Arg Ala Ile
80 85 90

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Glu Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys
95 100 105

(2) INFORMATION FOR SEQ ID NO:54:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 105 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:54:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Arg	Arg	Ala	Val	Gly	Ala	35	40	45	
Leu	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Ala	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Lys	Ala	Ile	80	85	90	
Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105	

(2) INFORMATION FOR SEQ ID NO:55:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 105 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:55:

Gly	Gly	Gly	Asp	Met	Lys	Asp	Asn	Trp	Arg	Ser	Lys	Leu	Tyr	Lys	1	5	10	15
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	---	---	----	----

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Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Arg
 20 25 30
 Ala Lys Arg Arg Val Val Gln Arg Glu Lys Arg Ala Val Gly Thr
 35 40 45
 Ile Gly Ala Met Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr
 50 55 60
 Met Gly Ala Ala Ser Ile Thr Leu Met Val Gln Ala Arg Gln Leu
 65 70 75
 Leu Ser Gly Ile Val Gln Gln Gln Arg Asn Leu Leu Arg Ala Ile
 80 85 90
 Glu Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys
 95 100 105

(2) INFORMATION FOR SEQ ID NO:56:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 93 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:56:

Gly Gly Gly Asn Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
 1 5 10 15
 Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Arg
 20 25 30
 Ala Lys Arg Arg Val Val Gln Arg Glu Lys Arg Ala Val Gly Ile
 35 40 45
 Gly Ala Val Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
 50 55 60
 Gly Ala Arg Ser Met Thr Leu Thr Val Gln Ala Arg Leu Leu Leu
 65 70 75
 Ser Gly Ile Val Gln Gln Gln Asn Asn Leu Leu Arg Ala Ile Glu
 80 85 90

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Ala Gln Gln
93

(2) INFORMATION FOR SEQ ID NO:57:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 94 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:57:

Gly Gly Gly Asn Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15
Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Arg
20 25 30
Ala Lys Arg Arg Val Val Gln Arg Glu Lys Arg Ala Val Gly Ile
35 40 45
Gly Ala Val Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
50 55 60
Gly Ala Arg Ser Met Thr Leu Thr Val Gln Ala Arg Leu Leu Leu
65 70 75
Ser Gly Ile Val Gln Gln Gln Asn Asn Leu Leu Arg Ala Ile Glu
80 85 90
Ala Gln Gln His
94

(2) INFORMATION FOR SEQ ID NO:58:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 79 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:58:

Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15

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Tyr Lys Val Val Arg Ile Glu Pro Leu Gly Ile Ala Pro Thr Arg
 20 25 30
 Ala Lys Arg Arg Glu Val Gln Arg Glu Lys Arg Ala Val Gly Thr
 35 40 45
 Leu Gly Ala Met Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr
 50 55 60
 Met Gly Ala Ala Ser Val Ala Leu Thr Val Pro Leu Arg Arg Ile
 65 70 75
 Arg Ser Cys Xaa
 79

(2) INFORMATION FOR SEQ ID NO:59:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 79 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:59:

Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
 1 5 10 15
 Tyr Lys Val Val Arg Ile Glu Pro Leu Gly Val Ala Pro Thr Lys
 20 25 30
 Ala Lys Arg Arg Val Val Gln Gly Glu Lys Arg Ala Val Gly Thr
 35 40 45
 Ile Gly Ala Met Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr
 50 55 60
 Met Gly Ala Arg Ser Ile Thr Leu Thr Val Pro Leu Arg Arg Ile
 65 70 75
 Arg Ser Cys Xaa
 79

(2) INFORMATION FOR SEQ ID NO:60:

- (i) SEQUENCE CHARACTERISTICS:

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(A) LENGTH: 79 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr
				35					40					45
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr
				50					55					60
Met	Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Pro	Val	Arg	Arg	Ile
				65					70					75
Arg	Ser	Cys	Xaa											
				79										

(2) INFORMATION FOR SEQ ID NO:61:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 55 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:61:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Thr
				35					40					45
Ile	Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly					
				50					55					

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(2) INFORMATION FOR SEQ ID NO:62:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 55 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:62:

Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5				10						15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg
				20				25						30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Thr
				35				40						45
Ile	Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly					
				50				55						

(2) INFORMATION FOR SEQ ID NO:63:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 54 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:63:

Gly	Gly	Gly	Asn	Met	Lys	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5				10						15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg
				20				25						30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Thr	Met
				35				40						45
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly						
				50				54						

(2) INFORMATION FOR SEQ ID NO:64:

- (i) SEQUENCE CHARACTERISTICS:

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(A) LENGTH: 54 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:64:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu
				35					40					45
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly						
				50				54						

(2) INFORMATION FOR SEQ ID NO:65:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 41 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:65:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Thr
				20					25					30
Ala	Lys	Arg	Arg	Val	Met	Gln	Arg	Glu	Lys	Arg				
				35					40	41				

(2) INFORMATION FOR SEQ ID NO:66:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 34 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:

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Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15

Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Thr
20 25 30

Ala Lys Arg Arg
34

(2) INFORMATION FOR SEQ ID NO:67:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 270 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:67:

Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15

Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Arg
20 25 30

Ala Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala Val Gly Xaa
35 40 45

Leu Gly Ala Val Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr
50 55 60

Met Gly Ala Ala Ser Ile Thr Leu Thr Val Gln Ala Arg Gln Leu
65 70 75

Leu Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile
80 85 90

Glu Ala Gln Gln His Leu Leu Lys Leu Thr Val Trp Gly Ile Lys
95 100 105

Gln Leu Gln Ala Arg Val Leu Ala Val Glu Arg Tyr Leu Lys Asp
110 115 120

Gln Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly Lys Leu Ile Cys
125 130 135

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Thr	Thr	Asn	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Lys	Ser	Xaa
				140					145					150
Gln	Ser	Xaa	Ile	Trp	Asp	Asn	Met	Thr	Trp	Leu	Gln	Trp	Asp	Lys
				155					160					165
Glu	Ile	Ser	Asn	Tyr	Thr	Xaa	Ile	Ile	Tyr	Asn	Leu	Ile	Glu	Glu
				170					175					180
Ser	Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Ala	Leu
				185					190					195
Asp	Lys	Trp	Ala	Asn	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Ser	Asn	Trp
				200					205					210
Leu	Trp	Tyr	Ile	Xaa	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile
				215					220					225
Gly	Leu	Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Ile	Asn	Arg	Val
				230					235					240
Arg	Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Thr	Pro	Asn
				245					250					255
Pro	Arg	Xaa	Pro	Asp	Arg	Pro	Gly	Arg	Ile	Glu	Glu	Glu	Gly	Gly
				260					265					270

(2) INFORMATION FOR SEQ ID NO:68:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:68:

Thr	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Pro
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Gln	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45

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Gly	Ala	Val	Phe	Ile	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	
				50					55					60	
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	
				65					70					75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	Glu	
				80					85					90	
Ala	Gln	Gln	His	Leu	Leu	Lys	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	
				95					100					105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	
				110					115					120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	
				125					130					135	
Thr	Asn	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Arg	Thr	Gln	Ser	
				140					145					150	
Glu	Ile	Trp	Asn	Asn	Met	Thr	Trp	Leu	Gln	Trp	Asp	Lys	Glu	Ile	
				155					160					165	
Ser	Asn	Tyr	Thr	Asp	Ile	Ile	Tyr	Asn	Leu	Ile	Glu	Glu	Ser	Gln	
				170					175					180	
Ile	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Glu	Leu	Leu	Ala	Leu	Asp	Lys	
				185					190					195	
Trp	Ala	Asn	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Ser	Lys	Trp	Leu	Trp	
				200					205					210	
Tyr	Ile	Arg	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	
				215					220					225	
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Ile	Asn	Arg	Val	Arg	Gln	
				230					235					240	
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Ile	His	Thr	Pro	Asn	Pro	Arg	
				245					250					255	
Gly	Pro	Asp	Arg	Pro	Glu	Arg	Ile	Glu	Glu	Glu	Gly	Gly			
				260					265			268			

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(2) INFORMATION FOR SEQ ID NO:69:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 267 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:69:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Lys	Ser	Glu	Leu	Tyr	Lys	
1				5					10					15	
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg	
				20					25					30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu	
				35					40					45	
Gly	Ala	Ile	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	
				50					55					60	
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	
				65					70					75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	Glu	
				80					85					90	
Ala	Gln	Gln	His	Leu	Leu	Lys	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	
				95					100					105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Gln	Asp	Gln	
				110					115					120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	
				125					130					135	
Thr	Thr	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Lys	Ser	Gln	Glu	
				140					145					150	
Asp	Ile	Trp	Asn	Asn	Met	Thr	Trp	Leu	Gln	Trp	Glu	Lys	Glu	Ile	
				155					160					165	
Ser	Ser	Tyr	Thr	Gly	Ile	Ile	Tyr	Gln	Leu	Ile	Glu	Glu	Ser	Gln	
				170					175					180	

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Asn	Gln	Gln	Glu	Lys	Asn	Glu	Leu	Asp	Leu	Leu	Ala	Leu	Asp	Lys
				185					190					195
Trp	Ala	Asn	Leu	Asn	Trp	Phe	Asn	Ile	Ser	Asn	Trp	Leu	Trp	Tyr
				200					205					210
Ile	Arg	Leu	Phe	Val	Ile	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	Arg
				215					220					225
Ile	Val	Phe	Thr	Val	Leu	Ser	Ile	Ile	Asn	Arg	Val	Arg	Gln	Gly
				230					235					240
Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Ala	Pro	Ile	Pro	Glu	Gly
				245					250					255
Leu	Gly	Arg	Pro	Gly	Arg	Ile	Glu	Glu	Glu	Gly	Gly			
				260					265		267			

(2) INFORMATION FOR SEQ ID NO:70:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:70:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Ala	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Met
				35					40					45
Gly	Ala	Phe	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Arg	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80					85					90

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Ala	Gln	Gln	His	Leu	Leu	Lys	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105
Leu	Gln	Ala	Arg	Ile	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Ile	Ile	Cys	Pro	125	130	135
Thr	Asn	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Lys	Ser	Gln	Ser	140	145	150
Asp	Ile	Trp	Asp	Lys	Met	Thr	Trp	Leu	Glu	Trp	Asp	Lys	Glu	Val	155	160	165
Ser	Asn	Tyr	Thr	Gln	Val	Ile	Tyr	Asn	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180
Thr	Gln	Gln	Glu	Ile	Asn	Glu	Arg	Asp	Leu	Leu	Ala	Leu	Asp	Lys	185	190	195
Trp	Ala	Asn	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Ser	Asn	Trp	Leu	Trp	200	205	210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	215	220	225
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Ile	Asn	Arg	Val	Arg	Gln	230	235	240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Thr	His	His	Gln	Arg	245	250	255
Glu	Pro	Asp	Arg	Pro	Glu	Arg	Ile	Glu	Glu	Gly	Gly	Gly			260	265	268

(2) INFORMATION FOR SEQ ID NO:71:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:71:

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Gly	Gly	Gly	Asn	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Ser	Arg	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45	
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Ala	Gln	Ala	Arg	Gln	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Met	Leu	Lys	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135	
Thr	Asn	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Lys	Ser	Met	Asn	140	145	150	
Glu	Ile	Trp	Asp	Asn	Met	Thr	Trp	Leu	Gln	Trp	Asp	Lys	Glu	Ile	155	160	165	
Ser	Asn	Tyr	Thr	Gln	Ile	Ile	Tyr	Asn	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180	
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Ala	Leu	Asp	Lys	185	190	195	
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Ser	Arg	Trp	Leu	Trp	200	205	210	
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	215	220	225	

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Arg Ile Val Phe Ala Val Leu Ser Val Ile Asn Arg Val Arg Gln
230 235 240

Gly Tyr Ser Pro Leu Ser Phe Gln Ile Arg Thr Pro Asn Pro Lys
245 250 255

Glu Pro Asp Arg Leu Gly Arg Ile Asp Gly Glu Gly Gly
260 265 268

(2) INFORMATION FOR SEQ ID NO:72:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 268 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:72:

Gly Gly Gly Asn Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15

Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Arg
20 25 30

Ala Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala Ile Gly Met
35 40 45

Gly Ala Val Phe Ile Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
50 55 60

Gly Ala Ala Ser Ile Thr Leu Met Val Gln Ala Arg Gln Leu Leu
65 70 75

Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
80 85 90

Ala Gln Gln His Leu Leu Arg Leu Thr Val Trp Gly Ile Lys Gln
95 100 105

Leu Gln Ala Arg Val Leu Ala Leu Glu Arg Tyr Leu Arg Asp Gln
110 115 120

Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly Lys Leu Ile Cys Thr
125 130 135

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Thr	Asn	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Lys	Ser	Tyr	Ser	140	145	150
Glu	Ile	Trp	Asp	Asn	Met	Thr	Trp	Leu	Gln	Trp	Asp	Lys	Glu	Ile	155	160	165
Asn	Asn	Tyr	Thr	Glu	Leu	Ile	Tyr	Ser	Leu	Ile	Glu	Asp	Ser	Gln	170	175	180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Ala	Leu	Asp	Lys	185	190	195
Trp	Ala	Asn	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Ser	Asn	Trp	Leu	Trp	200	205	210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	215	220	225
Arg	Ile	Ile	Phe	Ala	Val	Leu	Ser	Ile	Ile	Asn	Arg	Val	Arg	Gln	230	235	240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	His	Thr	Pro	Asn	Pro	Arg	245	250	255
Gly	Leu	Asp	Arg	Pro	Gly	Arg	Ile	Glu	Glu	Glu	Gly	Gly			260	265	268

(2) INFORMATION FOR SEQ ID NO:73:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 243 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:73:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Asp	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu	35	40	45	

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Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	65	70	75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Met	Ala	Ile	Glu	80	85	90
Ala	Gln	Gln	His	Leu	Leu	Lys	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Leu	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135
Thr	Thr	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Lys	Thr	Tyr	Ser	140	145	150
Asp	Ile	Trp	Asp	Asn	Met	Thr	Trp	Leu	Gln	Trp	Asp	Lys	Glu	Ile	155	160	165
Ser	Asn	Tyr	Thr	Lys	Ile	Ile	Tyr	Ala	Leu	Ile	Glu	Glu	Ser	Ala	170	175	180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Ala	Leu	Asp	Lys	185	190	195
Trp	Thr	Ser	Leu	Trp	Ser	Trp	Phe	Asp	Ile	Thr	Lys	Trp	Leu	Trp	200	205	210
Tyr	Ile	Arg	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	215	220	225
Arg	Ile	Val	Phe	Ala	Val	Leu	Asn	Ile	Ile	Asn	Arg	Val	Arg	Gln	230	235	240
Gly	Tyr	Ser													243		

(2) INFORMATION FOR SEQ ID NO:74:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 104 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:74:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu
				35					40					45
Gly	Ala	Val	Phe	Ile	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80					85					90
Ala	Gln	Gln	His	Leu	Leu	Lys	Leu	Thr	Val	Trp	Gly	Ile	Lys	
				95					100				104	

(2) INFORMATION FOR SEQ ID NO:75:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 54 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:75:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Ser	Arg
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Trp	Arg	Glu	Lys	Arg	Ala	Val	Val	Glu
				35					40					45

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Ile Gly Ala Val Phe Leu Gly Phe Leu
50 54

(2) INFORMATION FOR SEQ ID NO:76:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 269 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:76:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Glu	Ile	Lys	Pro	Leu	Gly	Val	Ala	Pro	Thr	Xaa	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Xaa	35	40	45	
Ile	Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	50	55	60	
Met	Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	65	70	75	
Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	80	85	90	
Glu	Ala	Gln	Gln	His	Xaa	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	95	100	105	
Gln	Leu	Gln	Thr	Arg	Val	Leu	Ala	Ile	Glu	Arg	Tyr	Leu	Lys	Asp	110	115	120	
Gln	Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	125	130	135	
Thr	Thr	Xaa	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Arg	Ser	Gln	140	145	150	
Thr	Asp	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Gln	Trp	Asp	Arg	Glu	155	160	165	

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Ile	Ser	Asn	Tyr	Thr	Asp	Thr	Ile	Tyr	Arg	Leu	Leu	Glu	Asp	Ser
				170					175					180
Gln	Asn	Gln	Gln	Glu	Arg	Asn	Glu	Lys	Asp	Leu	Leu	Ala	Leu	Asp
				185					190					195
Ser	Trp	Lys	Asn	Leu	Trp	Asn	Trp	Phe	Ser	Ile	Thr	Asn	Trp	Leu
				200					205					210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly
				215					220					225
Leu	Arg	Ile	Ile	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg
				230					235					240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Thr	Pro	Asn	Pro
				245					250					255
Arg	Gly	Pro	Asp	Arg	Leu	Gly	Arg	Ile	Glu	Glu	Glu	Gly	Gly	
				260					265				269	

(2) INFORMATION FOR SEQ ID NO:77:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:77:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Glu	Ile	Lys	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Val	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65					70					75

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Phe	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90
Ala	Gln	His	Gly	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105
Leu	Gln	Thr	Arg	Val	Leu	Ala	Ile	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr	125	130	135
Thr	Ala	Val	Ala	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Lys	Ser	Gln	Ser	140	145	150
Asp	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Glu	Trp	Asp	Arg	Glu	Ile	155	160	165
Ser	Asn	Tyr	Thr	Asp	Ile	Ile	Tyr	Lys	Leu	Leu	Glu	Asp	Ser	Gln	170	175	180
Asn	Gln	Gln	Glu	Lys	Asn	Glu	Lys	Asp	Leu	Leu	Ala	Leu	Asp	Ser	185	190	195
Trp	Lys	Asn															

(2) INFORMATION FOR SEQ ID NO:78:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 198 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:78:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Glu	Ile	Lys	Pro	Leu	Gly	Val	Ala	Pro	Thr	Glu	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45	

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Gly Ala Val Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
 50 55 60
 Gly Ala Ala Ser Ile Thr Leu Thr Val Gln Ala Arg Gln Leu Leu
 65 70 75
 Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
 80 85 90
 Ala Arg Gln Gly Met Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
 95 100 105
 Leu Gln Ala Arg Val Leu Ala Ile Glu Arg Tyr Leu Gln Asp Gln
 110 115 120
 Gln Leu Leu Gly Leu Trp Gly Cys Ser Gly Lys Leu Ile Cys Thr
 125 130 135
 Thr Thr Val Pro Trp Asn Ser Ser Trp Ser Asn Lys Ser Lys Thr
 140 145 150
 Asp Ile Trp Asp Asn Met Thr Trp Met Gln Trp Asp Arg Glu Ile
 155 160 165
 Ser Asn Tyr Thr Asp Thr Ile Tyr Lys Leu Leu Glu Asp Ser Gln
 170 175 180
 Asn Gln Gln Glu Lys Asn Glu Lys Asp Leu Leu Ala Leu Asp Ser
 185 190 195
 Trp Asn Asn
 198

(2) INFORMATION FOR SEQ ID NO:79:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 198 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:79:

Gly Gly Gly Asp Met Arg Asn Asn Trp Arg Ser Glu Leu Tyr Lys
 1 5 10 15

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Tyr Lys Val Val Glu Ile Lys Pro Leu Gly Val Ala Pro Thr Thr
 20 25 30
 Ala Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala Val Gly Ile
 35 40 45
 Gly Ala Val Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
 50 55 60
 Gly Ala Ala Ser Met Thr Leu Thr Val Gln Ala Arg Gln Leu Leu
 65 70 75
 Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
 80 85 90
 Ala Gln Gln Gly Leu Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
 95 100 105
 Leu Gln Thr Arg Val Leu Ala Ile Glu Arg Tyr Leu Lys Asp Gln
 110 115 120
 Gln Leu Leu Gly Ile Trp Gly Arg Ser Gly Lys Leu Ile Cys Thr
 125 130 135
 Thr Asn Val Pro Trp Asn Ser Ser Trp Ser Asn Arg Ser Gln Thr
 140 145 150
 Asp Ile Trp Asp Asn Met Thr Trp Met Gln Trp Asp Arg Glu Ile
 155 160 165
 Ser Asn Tyr Thr Asp Thr Ile Tyr Arg Leu Leu Glu Asp Ser Gln
 170 175 180
 Asn Gln Gln Glu Arg Asn Glu Lys Asp Leu Leu Ala Leu Asp Ser
 185 190 195
 Trp Lys Asn
 198

(2) INFORMATION FOR SEQ ID NO:80:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:80:

Gly Gly Gly Glu Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15
Tyr Lys Val Val Glu Ile Lys Pro Leu Gly Val Ala Pro Thr Thr
20 25 30
Ala Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala Val Gly Ile
35 40 45
Gly Ala Val Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
50 55 60
Gly Ala Ala Ser Met Thr Val Thr Val Gln Ala Arg Gln Leu Leu
65 70 75
Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
80 85 90
Ala Gln Gln Gly Leu Leu Gln Leu Thr Ile Trp Gly Ile Lys Gln
95 100 105
Leu Gln Ala Arg Val Leu Ala Ile Glu Arg Tyr Leu Lys Glu Gln
110 115 120
Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly Lys Leu Ile Cys Thr
125 130 135
Thr Thr Val Pro Trp Asn Ser Ser Trp Ser Asn Arg Ser Gln Thr
140 145 150
Asp Ile Trp Asp Asn Met Thr Trp Met Gln Trp Asp Arg Glu Ile
155 160 165
Ser Asn Tyr Thr Glu Thr Ile Tyr Arg Leu Leu Glu Asp Ser Gln
170 175 180
Asn Gln Gln Glu Arg Asn Glu Lys Asp Leu Leu Ala Leu Asp Ser
185 190 195
Trp Lys Asn
198

(2) INFORMATION FOR SEQ ID NO:81:

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105150 97845860

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 198 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:81:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Glu	Ile	Lys	Pro	Leu	Gly	Val	Ala	Pro	Thr	Thr
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Leu
				35					40					45
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80					85					90
Ala	Gln	Gln	Gly	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln
				95					100					105
Leu	Gln	Thr	Arg	Val	Leu	Ala	Ile	Glu	Arg	Tyr	Leu	Lys	Asp	Gln
				110					115					120
Gln	Leu	Leu	Gly	Met	Trp	Gly	Cys	Ser	Gly	Lys	Leu	Ile	Cys	Thr
				125					130					135
Thr	Ala	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Arg	Ser	Gln	Thr
				140					145					150
Asp	Ile	Trp	Asp	Asn	Met	Thr	Trp	Met	Gln	Trp	Asp	Arg	Glu	Ile
				155					160					165
Ser	Asn	Tyr	Thr	Asn	Thr	Ile	Tyr	Arg	Leu	Leu	Glu	Asp	Ser	Gln
				170					175					180
Asn	Gln	Gln	Glu	Arg	Asn	Glu	Lys	Asp	Leu	Leu	Ala	Leu	Asp	Ser
				185					190					195

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Trp Lys Asn
198

(2) INFORMATION FOR SEQ ID NO:82:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 121 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:82:

Gly Gly Gly Asn Met Lys Asp Asn Trp Arg Asn Glu Leu Tyr Lys
1 5 10 15
Tyr Lys Val Val Glu Ile Lys Pro Leu Gly Ile Ala Pro Thr Gly
20 25 30
Ser Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala Val Gly Ile
35 40 45
Gly Ala Val Leu Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
50 55 60
Ala Ala Ala Ser Ile Thr Leu Thr Val Gln Ala Arg Gln Leu Leu
65 70 75
Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
80 85 90
Ala Gln Gln Gly Met Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
95 100 105
Leu Gln Thr Arg Val Leu Ala Ile Glu Arg Tyr Leu Lys Asp Gln
110 115 120
Gln
121

(2) INFORMATION FOR SEQ ID NO:83:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 72 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:83:

Gly	Gly	Gly	Asp	Met	Arg	Asn	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Glu	Ile	Lys	Pro	Leu	Gly	Val	Ala	Pro	Thr	Thr
				20					25					30
Pro	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Pro	Leu	Arg			
				65					70		72			

(2) INFORMATION FOR SEQ ID NO:84:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 269 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:84:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Xaa	Ala	Pro	Thr	Xaa
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Leu
				35					40					45
Gly	Ala	Xaa	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80					85					90

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Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	His	Ile	Cys	Thr	125	130	135
Thr	Xaa	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Arg	Ser	Leu	Asp	140	145	150
Glu	Ile	Trp	Gln	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile	155	160	165
Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Ser	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180
Ile	Gln	Gln	Glu	Lys	Asn	Glu	Lys	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195
Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Ser	Ile	Thr	Lys	Trp	Leu	Trp	200	205	210
Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	Leu	215	220	225
Arg	Ile	Val	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	Gln	230	235	240
Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Leu	Leu	Pro	Ala	Pro	Arg	245	250	255
Gly	Xaa	Pro	Asp	Arg	Pro	Glu	Gly	Ile	Glu	Glu	Glu	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:85:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:85:

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Gly	Gly	Gly	Asp	Met	Lys	Asp	Asn	Trp	Arg	Asn	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Arg	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Leu	35	40	45	
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Val	Ser	Val	Ala	Leu	Thr	Gly	Gln	Ala	Arg	Gln	Leu	Leu	65	70	75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Met	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Ser	Tyr	Leu	Lys	Asp	Gln	110	115	120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Lys	His	Ile	Cys	Thr	125	130	135	
Thr	Thr	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Glu	140	145	150	
Glu	Ile	Trp	Asn	Asn	Met	Thr	Trp	Ile	Glu	Trp	Glu	Arg	Glu	Ile	155	160	165	
Asp	Asn	Tyr	Thr	Gly	Val	Ile	Tyr	Ser	Leu	Ile	Glu	Asn	Ser	Gln	170	175	180	
Ile	Gln	Gln	Glu	Lys	Asn	Glu	Gln	Asp	Leu	Leu	Gln	Leu	Asp	Lys	185	190	195	
Trp	Ala	Ser													198			

(2) INFORMATION FOR SEQ ID NO:86:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 198 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:86:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Ile	Gly	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Arg	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Leu	35	40	45	
Gly	Ala	Val	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60	
Gly	Ala	Ala	Ser	Val	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Met	65	70	75	
Ser	Gly	Ile	Val	His	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Arg	Asp	Gln	110	115	120	
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Arg	His	Ile	Cys	Thr	125	130	135	
Thr	Asn	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Arg	Ser	Leu	Asp	140	145	150	
Glu	Ile	Trp	Gln	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile	155	160	165	
Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Ser	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180	
Ile	Gln	Gln	Glu	Lys	Asn	Glu	Lys	Glu	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195	

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Trp Ala Ser
198

(2) INFORMATION FOR SEQ ID NO:87:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:87:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Ile	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Leu
				35					40					45
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80					85					90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln
				95					100					105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Gln	Asp	Gln
				110					115					120
Arg	Leu	Leu	Gly	Met	Trp	Gly	Cys	Ser	Gly	Lys	His	Ile	Cys	Thr
				125					130					135
Thr	Phe	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Arg	Ser	Leu	Asp
				140					145					150
Asp	Ile	Trp	Asn	Asn	Met	Thr	Trp	Met	Gln	Trp	Glu	Lys	Glu	Ile
				155					160					165

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Ser Asn Tyr Thr Gly Ile Ile Tyr Asn Leu Ile Glu Glu Ser Gln
170 175 180

Ile Gln Gln Glu Lys Asn Glu Lys Glu Leu Leu Glu Leu Asp Lys
185 190 195

Trp Ala Ser
198

(2) INFORMATION FOR SEQ ID NO:88:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 198 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:88:

Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15

Tyr Lys Val Val Gln Ile Glu Pro Leu Gly Val Ala Pro Thr Arg
20 25 30

Ala Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala Ile Gly Leu
35 40 45

Gly Ala Met Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
50 55 60

Gly Ala Arg Ser Val Thr Leu Thr Val Gln Ala Arg Gln Leu Met
65 70 75

Ser Gly Ile Val Gln Gln Gln Asn Asn Leu Leu Arg Ala Ile Glu
80 85 90

Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
95 100 105

Leu Gln Ala Arg Ile Leu Ala Val Glu Arg Tyr Leu Lys Asp Gln
110 115 120

Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly Lys His Ile Cys Thr
125 130 135

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Thr	Asn	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Arg	Ser	Leu	Asn
				140					145					150
Glu	Ile	Trp	Gln	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile
				155					160					165
Asp	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Ser	Leu	Ile	Glu	Glu	Ser	Gln
				170					175					180
Thr	Gln	Gln	Glu	Lys	Asn	Glu	Lys	Glu	Leu	Leu	Glu	Leu	Asp	Lys
				185					190					195
Trp	Ala	Ser												

(2) INFORMATION FOR SEQ ID NO:89:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:89:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Arg
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Leu
				35					40					45
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Arg	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80					85					90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln
				95					100					105

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Leu Gln Ala Arg Ile Leu Ala Val Glu Arg Tyr Leu Lys Asp Gln
 110 115 120
 Gln Leu Leu Gly Ile Trp Gly Cys Ser Gly Lys Leu Ile Cys Thr
 125 130 135
 Thr Thr Val Pro Trp Asn Ser Ser Trp Ser Asn Arg Ser Leu Asn
 140 145 150
 Asp Ile Trp Gln Asn Met Thr Trp Met Glu Trp Glu Arg Glu Ile
 155 160 165
 Asp Asn Tyr Thr Gly Leu Ile Tyr Arg Leu Ile Glu Glu Ser Gln
 170 175 180
 Thr Gln Gln Glu Lys Asn Glu Gln Glu Leu Leu Glu Leu Asp Lys
 185 190 195
 Trp Ala Ser
 198

(2) INFORMATION FOR SEQ ID NO:90:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:90:

Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
 1 5 10 15
 Tyr Lys Val Ile Lys Ile Glu Pro Leu Gly Leu Ala Pro Thr Arg
 20 25 30
 Ala Lys Arg Arg Val Val Ala Arg Glu Lys Arg Ala Ile Gly Leu
 35 40 45
 Gly Ala Val Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
 50 55 60
 Gly Ala Ala Ser Leu Thr Leu Thr Val Gln Ala Arg Gln Leu Met
 65 70 75

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Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Ser	Tyr	Leu	Lys	Asp	Gln	110	115	120
Gln	Leu	Leu	Gly	Ile	Trp	Gly	Cys	Ser	Gly	Arg	His	Ile	Cys	Pro	125	130	135
Thr	Gln	Val	Pro	Trp	Asn	Ser	Ser	Trp	Ser	Asn	Lys	Ser	Leu	Asp	140	145	150
Thr	Ile	Trp	Gly	Asn	Met	Thr	Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile	155	160	165
Ser	Asn	Tyr	Thr	Gly	Leu	Ile	Tyr	Asp	Leu	Ile	Glu	Glu	Ser	Gln	170	175	180
Ile	Gln	Gln	Glu	Lys	Asn	Glu	Lys	Asp	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195
Trp	Ala	Ser													198		

(2) INFORMATION FOR SEQ ID NO:91:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 104 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:91:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Asn	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Leu	Ala	Pro	Thr	Lys	20	25	30	
Ala	Arg	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Leu	35	40	45	

Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Leu	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu
				65					70					75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	Leu	Arg	Ala	Ile	Glu
				80					85					90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	
				95					100				104	

(2) INFORMATION FOR SEQ ID NO:92:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 70 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:92:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Met
				20					25					30
Ser	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Leu
				35					40					45
Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Thr	Leu	Thr	Leu	Thr	Val	Xaa					
				65					70					

(2) INFORMATION FOR SEQ ID NO:93:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 70 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:93:

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Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Gly	Leu	Ala	Pro	Thr	Glu
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Ile	Gly	Leu
				35					40					45
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Ala	Ser	Met	Thr	Leu	Thr	Val	Xaa					
				65					70					

(2) INFORMATION FOR SEQ ID NO:94:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 53 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:94:

Gly	Gly	Gly	Asp	Met	Arg	Asp	Asn	Arg	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Lys	Ile	Glu	Pro	Leu	Gly	Val	Ala	Pro	Thr	Lys
				20					25					30
Thr	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Glu	Arg	Ala	Ile	Gly	Leu
				35					40					45
Gly	Ala	Met	Phe	Leu	Gly	Phe	Leu							
				50			53							

(2) INFORMATION FOR SEQ ID NO:95:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 41 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:95:

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Gly Gly Gly Asp Met Arg Asp Asn Trp Arg Ser Glu Leu Tyr Lys
 1 5 10 15
 Tyr Lys Val Val Arg Ile Glu Pro Leu Gly Ile Ala Pro Thr Met
 20 25 30
 Ala Lys Arg Arg Val Val Glu Arg Glu Lys Arg
 35 40 41

(2) INFORMATION FOR SEQ ID NO:96:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 269 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:96:

Gly Gly Gly Asn Ile Lys Asp Asn Trp Arg Ser Glu Leu Tyr Lys
 1 5 10 15
 Tyr Lys Val Val Gln Ile Glu Pro Leu Gly Ile Ala Pro Thr Arg
 20 25 30
 Ala Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala Val Gly Xaa
 35 40 45
 Ile Gly Ala Met Ile Phe Gly Phe Leu Gly Ala Ala Gly Ser Thr
 50 55 60
 Met Gly Ala Ala Ser Ile Thr Leu Thr Val Gln Ala Arg Gln Leu
 65 70 75
 Leu Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile
 80 85 90
 Glu Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys
 95 100 105
 Gln Leu Gln Ala Arg Val Leu Ala Val Glu Arg Tyr Leu Lys Asp
 110 115 120
 Gln Lys Phe Leu Gly Leu Trp Gly Cys Ser Gly Lys Ile Ile Cys
 125 130 135

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Thr	Thr	Ala	Val	Pro	Trp	Asn	Ser	Thr	Trp	Ser	Asn	Arg	Ser	Phe	140	145	150
Glu	Glu	Ile	Trp	Asn	Asn	Met	Thr	Trp	Ile	Glu	Trp	Glu	Arg	Glu	155	160	165
Ile	Ser	Asn	Tyr	Thr	Asn	Gln	Ile	Tyr	Glu	Ile	Leu	Thr	Glu	Ser	170	175	180
Gln	Asn	Gln	Gln	Asp	Arg	Asn	Glu	Lys	Asp	Leu	Leu	Glu	Leu	Asp	185	190	195
Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp	Phe	Asp	Ile	Thr	Asn	Trp	Leu	200	205	210
Trp	Tyr	Ile	Lys	Ile	Phe	Ile	Met	Ile	Val	Gly	Gly	Leu	Ile	Gly	215	220	225
Leu	Arg	Ile	Ile	Phe	Ala	Val	Leu	Ser	Ile	Val	Asn	Arg	Val	Arg	230	235	240
Gln	Gly	Tyr	Ser	Pro	Leu	Ser	Phe	Gln	Thr	Pro	Xaa	His	His	Gln	245	250	255
Arg	Glu	Pro	Asp	Arg	Pro	Glu	Arg	Ile	Glu	Glu	Gly	Gly	Gly		260	265	269

(2) INFORMATION FOR SEQ ID NO:97:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:97:

Gly	Gly	Gly	Asn	Ile	Lys	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Gln	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Arg	20	25	30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	35	40	45	

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Gly	Ala	Met	Ile	Phe	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	50	55	60
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Val	65	70	75
Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	Glu	80	85	90
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	95	100	105
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	110	115	120
Lys	Phe	Leu	Gly	Leu	Trp	Gly	Cys	Ser	Gly	Lys	Ile	Ile	Cys	Thr	125	130	135
Thr	Ala	Val	Pro	Trp	Asn	Ser	Thr	Trp	Ser	Asn	Arg	Ser	Phe	Glu	140	145	150
Glu	Ile	Trp	Ser	Asn	Met	Thr	Trp	Ile	Glu	Trp	Glu	Arg	Glu	Ile	155	160	165
Ser	Asn	Tyr	Thr	Asn	Gln	Ile	Tyr	Glu	Ile	Leu	Thr	Glu	Ser	Gln	170	175	180
Asn	Gln	Gln	Asp	Arg	Asn	Glu	Lys	Asp	Leu	Leu	Glu	Leu	Asp	Lys	185	190	195
Trp	Ala	Ser															

(2) INFORMATION FOR SEQ ID NO:98:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 198 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:98:

Gly	Gly	Gly	Asn	Ile	Lys	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	---	---	----	----

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Tyr Lys Val Val Gln Ile Glu Pro Leu Gly Ile Ala Pro Thr Arg
 20 25 30
 Ala Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala Val Gly Ile
 35 40 45
 Gly Ala Met Ile Phe Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
 50 55 60
 Gly Ala Ala Ser Ile Thr Leu Thr Val Gln Ala Arg Gln Leu Leu
 65 70 75
 Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
 80 85 90
 Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
 95 100 105
 Leu Gln Ala Arg Val Leu Ala Val Glu Arg Tyr Leu Lys Asp Gln
 110 115 120
 Lys Phe Leu Gly Leu Trp Gly Cys Ser Gly Lys Ile Ile Cys Thr
 125 130 135
 Thr Ala Val Pro Trp Asn Ser Thr Trp Ser Asn Arg Ser Phe Glu
 140 145 150
 Glu Ile Trp Asn Asn Met Thr Trp Thr Glu Trp Glu Arg Glu Ile
 155 160 165
 Ser Asn Tyr Thr Asn Gln Ile Tyr Asp Ile Leu Thr Glu Ser Gln
 170 175 180
 Asn Gln Gln Asp Arg Asn Glu Lys Asp Leu Leu Gly Leu Asp Lys
 185 190 195
 Trp Ala Ser
 198

(2) INFORMATION FOR SEQ ID NO:99:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 198 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

00854016 051501

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:99:

Gly Gly Gly Asn Ile Lys Asp Asn Trp Arg Ser Glu Leu Tyr Lys
1 5 10 15
Tyr Lys Val Val Gln Ile Glu Pro Leu Gly Ile Ala Pro Thr Arg
20 25 30
Ala Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala Val Gly Ile
35 40 45
Gly Ala Met Ile Phe Gly Phe Leu Gly Ala Ala Gly Ser Thr Met
50 55 60
Gly Ala Ala Ser Ile Thr Leu Thr Val Gln Ala Arg Gln Leu Leu
65 70 75
Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
80 85 90
Ala Gln Gln His Met Leu Gln Leu Thr Val Trp Gly Ile Lys Gln
95 100 105
Leu Gln Ala Arg Val Leu Ala Val Glu Arg Tyr Leu Lys Asp Gln
110 115 120
Lys Phe Leu Gly Leu Trp Gly Cys Ser Gly Lys Ile Ile Cys Thr
125 130 135
Thr Ala Val Pro Trp Asn Ser Thr Trp Ser Asn Lys Ser Phe Glu
140 145 150
Glu Ile Trp Asn Asn Met Thr Trp Thr Glu Trp Glu Arg Glu Ile
155 160 165
Ser Asn Tyr Thr Asn Gln Ile Tyr Glu Ile Leu Thr Glu Ser Gln
170 175 180
Asn Gln Gln Asp Arg Asn Glu Lys Asp Leu Leu Glu Leu Asp Lys
185 190 195
Trp Ala Ser
198

(2) INFORMATION FOR SEQ ID NO:100:

00854816 051504
FOF50" 9F878860

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 189 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:100:

Gly	Gly	Gly	Asn	Ile	Lys	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	
1				5					10					15	
Tyr	Lys	Val	Val	Gln	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Arg	
				20					25					30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	
				35					40					45	
Gly	Ala	Met	Ile	Phe	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	
				50					55					60	
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	
				65					70					75	
Ser	Gly	Ile	Val	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Glu	Ala	Gln	
				80					85					90	
Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Gln	Leu	Gln	Ala	Arg	
				95					100					105	
Val	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	Lys	Leu	Gly	Leu	Trp	
				110					115					120	
Cys	Ser	Gly	Lys	Ile	Ile	Cys	Thr	Thr	Ala	Val	Pro	Trp	Asn	Ser	
				125					130					135	
Thr	Trp	Ser	Asn	Arg	Ser	Phe	Glu	Glu	Ile	Trp	Asn	Asn	Met	Trp	
				140					145					150	
Ile	Glu	Trp	Arg	Glu	Ile	Ser	Asn	Tyr	Thr	Asn	Gln	Ile	Tyr	Glu	
				155					160					165	
Ile	Leu	Thr	Glu	Ser	Gln	Asn	Gln	Gln	Asp	Arg	Asn	Glu	Lys	Asp	
				170					175					180	
Leu	Leu	Glu	Leu	Asp	Lys	Trp	Ala	Ser							
				185										189	

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(2) INFORMATION FOR SEQ ID NO:101:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 198 amino acids

(B) TYPE: Amino Acid

(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:101:

Gly	Gly	Gly	Asn	Ile	Lys	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	
1				5					10					15	
Tyr	Lys	Val	Val	Gln	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Arg	
				20					25					30	
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile	
				35					40					45	
Gly	Ala	Met	Ile	Phe	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met	
				50					55					60	
Gly	Ala	Ala	Ser	Ile	Thr	Leu	Thr	Val	Gln	Ala	Arg	Gln	Leu	Leu	
				65					70					75	
Ser	Gly	Ile	Val	Gln	Gln	Gln	Ser	Asn	Leu	Leu	Arg	Ala	Ile	Glu	
				80					85					90	
Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Thr	Val	Trp	Gly	Ile	Lys	Gln	
				95					100					105	
Leu	Gln	Ala	Arg	Val	Leu	Ala	Val	Glu	Arg	Tyr	Leu	Lys	Asp	Gln	
				110					115					120	
Lys	Phe	Leu	Gly	Leu	Trp	Gly	Cys	Ser	Gly	Lys	Ile	Ile	Cys	Thr	
				125					130					135	
Thr	Ala	Val	Pro	Trp	Asn	Ser	Thr	Trp	Ser	Asn	Arg	Ser	Leu	Glu	
				140					145					150	
Glu	Ile	Trp	Asn	Asn	Met	Thr	Trp	Ile	Glu	Trp	Glu	Arg	Glu	Ile	
				155					160					165	
Ser	Asn	Tyr	Thr	Asn	Arg	Ile	Tyr	Glu	Ile	Leu	Thr	Lys	Ser	Gln	
				170					175					180	

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Asp Gln Gln Asp Arg Asn Glu Lys Asp Leu Leu Glu Leu Asp Lys
185 190 195

Trp Ala Ser
198

(2) INFORMATION FOR SEQ ID NO:102:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 70 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:102:

Gly	Gly	Gly	Asn	Ile	Lys	Asp	Asn	Trp	Arg	Ser	Glu	Leu	Tyr	Lys
1				5					10					15
Tyr	Lys	Val	Val	Gln	Ile	Glu	Pro	Leu	Gly	Ile	Ala	Pro	Thr	Arg
				20					25					30
Ala	Lys	Arg	Arg	Val	Val	Glu	Arg	Glu	Lys	Arg	Ala	Val	Gly	Ile
				35					40					45
Gly	Ala	Met	Ile	Phe	Gly	Phe	Leu	Gly	Ala	Ala	Gly	Ser	Thr	Met
				50					55					60
Gly	Ala	Pro	Ser	Ile	Thr	Leu	Thr	Val	Xaa					
				65					70					

(2) INFORMATION FOR SEQ ID NO:103:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 213 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:103:

Xaa	Gly	Gly	Asp	Met	Lys	Asp	Ile	Trp	Arg	Thr	Glu	Leu	Tyr	Asn
1				5					10					15
Tyr	Lys	Val	Val	Arg	Ile	Lys	Pro	Xaa	Ser	Val	Ala	Pro	Thr	Lys
				20					25					30

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Xaa Xaa Arg Pro Xaa Ile Xaa Xaa Xaa Xaa Xaa His Arg Xaa Lys
35 40 45
Arg Ala Val Gly Xaa Leu Gly Met Leu Phe Leu Gly Val Leu Ser
50 55 60
Ala Ala Gly Ser Thr Met Gly Ala Ala Ala Thr Xaa Leu Thr Val
65 70 75
Gln Thr Xaa Xaa Leu Leu Lys Gly Ile Val Gln Gln Gln Asp Asn
80 85 90
Leu Leu Arg Ala Ile Xaa Ala Gln Gln His Leu Leu Xaa Leu Ser
95 100 105
Val Trp Gly Xaa Xaa Gln Leu Xaa Ala Arg Leu Leu Ala Xaa Glu
110 115 120
Thr Xaa Leu Gln Xaa Gln Gln Leu Leu Ser Leu Trp Gly Cys Lys
125 130 135
Gly Lys Leu Val Cys Tyr Thr Xaa Val Xaa Trp Asn Asn Ser Trp
140 145 150
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asn Ser Ser Xaa Xaa Xaa
155 160 165
Xaa Ile Trp Asp Asn Leu Thr Trp Gln Xaa Trp Asp Arg Leu Xaa
170 175 180
Ser Asn Xaa Xaa Xaa Xaa Ile Tyr Xaa Glu Xaa Gln Xaa Ala Gln
185 190 195
Xaa Gln Gln Glu Lys Asn Glu Lys Xaa Leu Leu Glu Leu Asp Glu
200 205 210
Trp Ala Ser
213

(2) INFORMATION FOR SEQ ID NO:104:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 200 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:104:

Ile	Gly	Gly	Asp	Met	Lys	Asp	Ile	Trp	Arg	Thr	Glu	Leu	Phe	Asn	
1				5				10						15	
Tyr	Lys	Val	Val	Arg	Val	Lys	Pro	Phe	Ser	Val	Ala	Pro	Thr	Arg	
				20				25						30	
Ile	Ala	Arg	Pro	Val	Ile	Ser	Thr	Arg	Thr	His	Arg	Glu	Lys	Arg	
				35				40						45	
Ala	Val	Gly	Leu	Gly	Met	Leu	Phe	Leu	Gly	Val	Leu	Ser	Ala	Ala	
				50				55						60	
Gly	Ser	Thr	Met	Gly	Ala	Ala	Ala	Thr	Thr	Leu	Ala	Val	Gln	Thr	
				65				70						75	
His	Thr	Leu	Leu	Lys	Gly	Ile	Val	Gln	Gln	Gln	Asp	Asn	Leu	Leu	
				80				85						90	
Arg	Ala	Ile	Gln	Ala	Gln	Gln	Gln	Leu	Leu	Arg	Leu	Ser	Xaa	Trp	
				95				100						105	
Gly	Ile	Arg	Gln	Leu	Arg	Ala	Arg	Leu	Leu	Ala	Leu	Glu	Thr	Leu	
				110				115						120	
Leu	Gln	Asn	Gln	Gln	Leu	Leu	Ser	Leu	Trp	Gly	Cys	Lys	Gly	Lys	
				125				130						135	
Leu	Val	Cys	Tyr	Thr	Ser	Val	Lys	Trp	Asn	Arg	Thr	Trp	Ile	Gly	
				140				145						150	
Asn	Glu	Ser	Ile	Trp	Asp	Thr	Leu	Thr	Trp	Gln	Glu	Trp	Asp	Arg	
				155				160						165	
Gln	Ile	Ser	Asn	Ile	Ser	Ser	Thr	Ile	Tyr	Glu	Glu	Ile	Gln	Lys	
				170				175						180	
Ala	Gln	Val	Gln	Gln	Glu	Gln	Asn	Glu	Lys	Lys	Leu	Leu	Glu	Leu	
				185				190						195	
Asp	Glu	Trp	Ala	Ser											
				200											

(2) INFORMATION FOR SEQ ID NO:105:

09854816-051501

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 204 amino acids
 (B) TYPE: Amino Acid
 (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:105:

Val	Gly	Gly	Asp	Met	Lys	Asp	Ile	Trp	Arg	Thr	Lys	Leu	Tyr	Asn	1	5	10	15
Tyr	Lys	Val	Val	Gln	Ile	Lys	Pro	Phe	Ser	Val	Ala	Pro	Thr	Lys	20	25	30	
Met	Ser	Arg	Pro	Ile	Ile	Asn	Ile	His	Thr	Pro	His	Arg	Glu	Lys	35	40	45	
Arg	Ala	Val	Gly	Leu	Gly	Met	Leu	Phe	Leu	Gly	Val	Leu	Ser	Ala	50	55	60	
Ala	Gly	Ser	Thr	Met	Gly	Ala	Ala	Ala	Thr	Ala	Leu	Thr	Val	Arg	65	70	75	
Thr	His	Ser	Val	Leu	Lys	Gly	Ile	Val	Gln	Gln	Gln	Asp	Asn	Leu	80	85	90	
Leu	Arg	Ala	Ile	Gln	Ala	Gln	Gln	His	Leu	Leu	Arg	Leu	Ser	Val	95	100	105	
Trp	Gly	Ile	Arg	Gln	Leu	Arg	Ala	Arg	Leu	Gln	Ala	Leu	Glu	Thr	110	115	120	
Leu	Ile	Gln	Asn	Gln	Gln	Arg	Leu	Asn	Leu	Trp	Gly	Cys	Lys	Gly	125	130	135	
Lys	Leu	Ile	Cys	Tyr	Thr	Ser	Val	Lys	Trp	Asn	Thr	Ser	Trp	Ser	140	145	150	
Gly	Arg	Tyr	Asn	Asp	Asp	Ser	Ile	Trp	Asp	Asn	Leu	Thr	Trp	Gln	155	160	165	
Gln	Trp	Asp	Gln	His	Ile	Asn	Asn	Val	Ser	Ser	Ile	Ile	Tyr	Asp	170	175	180	
Glu	Ile	Gln	Ala	Ala	Gln	Asp	Gln	Gln	Glu	Lys	Asn	Val	Lys	Ala	185	190	195	

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Leu Leu Glu Leu Asp Glu Trp Ala Ser
200 204

(2) INFORMATION FOR SEQ ID NO:106:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 204 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:106:

Thr	Gly	Gly	Asn	Met	Lys	Asp	Ile	Trp	Arg	Ser	Glu	Leu	Tyr	Lys	1	5	10	15
Tyr	Lys	Val	Val	Arg	Ile	Glu	Pro	Leu	Ser	Val	Ala	Pro	Thr	Lys	20	25	30	
Ala	Arg	Arg	His	Thr	Val	Ala	Arg	Gln	Lys	Asp	Arg	Gln	Lys	Arg	35	40	45	
Ala	Ala	Phe	Gly	Leu	Gly	Ala	Leu	Phe	Leu	Gly	Phe	Leu	Gly	Ala	50	55	60	
Ala	Gly	Ser	Thr	Met	Gly	Ala	Ala	Ala	Val	Thr	Leu	Thr	Val	Gln	65	70	75	
Ala	Arg	Gln	Leu	Leu	Ser	Gly	Ile	Val	Gln	Gln	Gln	Asn	Asn	Leu	80	85	90	
Leu	Lys	Ala	Ile	Glu	Ala	Gln	Gln	His	Leu	Leu	Gln	Leu	Ser	Ile	95	100	105	
Trp	Gly	Val	Lys	Gln	Leu	Gln	Ala	Arg	Leu	Leu	Ala	Val	Glu	Arg	110	115	120	
Tyr	Leu	Gln	Asp	Gln	Gln	Ile	Leu	Gly	Leu	Trp	Gly	Cys	Ser	Gly	125	130	135	
Lys	Ala	Val	Cys	Tyr	Thr	Thr	Val	Pro	Trp	Asn	Asn	Ser	Trp	Pro	140	145	150	
Gly	Ser	Asn	Ser	Thr	Asp	Asp	Ile	Trp	Gly	Asn	Leu	Thr	Trp	Gln	155	160	165	

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Gln Trp Asp Lys Leu Val Ser Asn Tyr Thr Gly Lys Ile Phe Gly
170 175 180

Leu Leu Glu Glu Ala Gln Ser Gln Gln Glu Lys Asn Glu Arg Asp
185 190 195

Leu Leu Glu Leu Asp Gln Trp Ala Ser
200 204

(2) INFORMATION FOR SEQ ID NO:107:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 30 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:107:

Glu Trp Asp Arg Glu Ile Asn Asn Tyr Thr Ser Leu Ile His Ser
1 5 10 15

Leu Ile Glu Glu Ser Gln Asn Gln Gln Glu Lys Asn Glu Gln Glu
20 25 30

(2) INFORMATION FOR SEQ ID NO:108:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 36 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:108:

Tyr Thr Ser Leu Ile His Ser Leu Ile Glu Glu Ser Gln Asn Gln
1 5 10 15

Gln Glu Lys Asn Glu Gln Glu Leu Leu Glu Leu Asp Lys Trp Ala
20 25 30

Ser Leu Trp Asn Trp Phe
35 36

(2) INFORMATION FOR SEQ ID NO:109:

- (i) SEQUENCE CHARACTERISTICS:

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- (A) LENGTH: 46 amino acids
- (B) TYPE: Amino Acid
- (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:109:

Trp	Met	Glu	Trp	Glu	Arg	Glu	Ile	Asp	Asn	Tyr	Thr	Xaa	Leu	Ile
1				5					10					15
Tyr	Thr	Leu	Ile	Glu	Glu	Ser	Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu
				20					25					30
Gln	Glu	Leu	Leu	Glu	Leu	Asp	Lys	Trp	Ala	Ser	Leu	Trp	Asn	Trp
				35					40					45
Phe														
46														

(2) INFORMATION FOR SEQ ID NO:110:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 46 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:110:

Trp	Leu	Gln	Trp	Asp	Lys	Glu	Ile	Ser	Asn	Tyr	Thr	Xaa	Ile	Ile
1				5					10					15
Tyr	Asn	Leu	Ile	Glu	Glu	Ser	Gln	Asn	Gln	Gln	Glu	Lys	Asn	Glu
				20					25					30
Gln	Asp	Leu	Leu	Ala	Leu	Asp	Lys	Trp	Ala	Asn	Leu	Trp	Asn	Trp
				35					40					45
Phe														
46														

(2) INFORMATION FOR SEQ ID NO:111:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 46 amino acids
 - (B) TYPE: Amino Acid
 - (D) TOPOLOGY: Linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:111:

Tyr Met Gln Trp Asp Arg Glu Ile Ser Asn Tyr Thr Asp Thr Ile
1 5 10 15
Tyr Arg Leu Leu Glu Asp Ser Gln Asn Gln Gln Glu Arg Asn Glu
20 25 30
Lys Asp Leu Leu Ala Leu Asp Ser Trp Lys Asn Leu Trp Asn Trp
35 40 45
Phe
46

(2) INFORMATION FOR SEQ ID NO:112:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 46 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:112:

Trp Met Glu Trp Glu Arg Glu Ile Asp Asn Tyr Thr Gly Leu Ile
1 5 10 15
Tyr Ser Leu Ile Glu Glu Ser Gln Ile Gln Gln Glu Lys Asn Glu
20 25 30
Lys Glu Leu Leu Glu Leu Asp Lys Trp Ala Ser Leu Trp Asn Trp
35 40 45
Phe
46

(2) INFORMATION FOR SEQ ID NO:113:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 40 amino acids
(B) TYPE: Amino Acid
(D) TOPOLOGY: Linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:113:

00054816-051501

Trp Ile Glu Trp Glu Arg Glu Ile Ser Asn Tyr Thr Asn Gln Ile
1 5 10 15

Tyr Glu Ile Leu Thr Glu Ser Gln Asn Gln Gln Asp Arg Asn Glu
20 25 30

Lys Asp Leu Leu Glu Leu Asp Lys Trp Ala
35 40

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